



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/771,692	02/04/2004	Edward Hosung Park	03-0052	3947
29293	7590	12/13/2005	EXAMINER	
FREUDENBERG-NOK GENERAL PARTNERSHIP LEGAL DEPARTMENT 47690 EAST ANCHOR COURT PLYMOUTH, MI 48170-2455			PICKARD, ALISON K	
			ART UNIT	PAPER NUMBER
			3673	

DATE MAILED: 12/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/771,692

Applicant(s)

PARK ET AL.

Examiner

Alison K. Pickard

Art Unit

3673

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12, 15, 18-20, 23, 25 and 26 is/are pending in the application.
- 4a) Of the above claim(s) 13, 14, 16, 17, 21, 22 and 24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12, 15, 18-20, 23, 25 and 26 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of group 1/figs. 1a/b in the reply filed on 10-11-05 is acknowledged. The traversal is on the ground(s) that there is no undue burden for search. This is not found persuasive because the restriction is proper if either the product can be made by another process or the process can produce another product. In this case, both are true. For example, the process can make another item that is not a seal with a length that is greater than the thickness.

The requirement is still deemed proper and is therefore made FINAL.

Claims 13,14, 16, 17, 21, 22, and 24 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected group/species, there being no allowable generic or linking claim.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-3, 15, and 18-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Pataille (6,520,507).

Pataille discloses a seal assembly comprising a ring radially extending to slidably engage a shaft. The radial seal has a length greater than the thickness (e.g. about 7 times). The radial

Art Unit: 3673

seal has a flat bearing surface in that segment 3 is flat with a spiral groove (in the same manner Applicant's is flat with a spiral groove).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pataille.

Pataille does not appear to disclose the material has a tangent delta as required by the claims. It is not considered inventive to discover the workable or optimum ranges by routine experimentation absent the showing of criticality for such ranges. See *In re Aller*, 105 USPQ 233, 235 (CCPA 1955). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to use a material having the claimed tangent delta.

6. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pataille in view of Johnston 2002/0158421.

Pataille does not appear to disclose a bead. Johnston teaches a seal assembly with art equivalent shapes including a smooth outer surface of the lip (i.e. similar to Pataille) or with a bead 128 on the outer surface of the lip. Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the seal with bead as such is an art equivalent structure.

7. Claims 4-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pataille in view of Sakai (5,206,293).

Pataille does not give the specifics of the material used for the ring. Sakai teaches an improved material with superior processability and resistance. Sakai teaches a cured fluorocarbon elastomer in a matrix of thermoplastic material. The fluorocarbon can be discrete or co-continuous. The fluorocarbon is present in the required weight ranges (e.g. see abstract) and can be selected from the group in claim 12 (e.g. col. 2, lines 22-27). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to make the ring from the material taught by Sakai to improve the seal.

Regarding claim 6, process limitations in a product claim are given little patentable weight.

Regarding claims 5, 7, 10, and 11, the required ranges are considered obvious. It is not considered inventive to discover the workable or optimum ranges by routine experimentation absent the showing of criticality for such ranges. See *In re Aller*, 105 USPQ 233, 235 (CCPA 1955).

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alison K. Pickard whose telephone number is 571-272-7062. The examiner can normally be reached on M-F (10-7:30), with alternate Friday's off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather Shackelford can be reached on 571-272-7049. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3673

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Alison K. Pickard
Primary Examiner
Art Unit 3673

AP